



Candy Boxes

Learning Standards:

6.A.1a Identify whole numbers and compare them using the symbols $<$, $>$, or $=$ and the words “less than”, “greater than”, or “equal to”, applying counting, grouping and place value concepts.

6.A.1b Identify and model fractions using concrete materials and pictorial representations.

6.A.2 Compare and order whole numbers, fractions and decimals using concrete materials, drawings and mathematical symbols.

6.C.2b Show evidence that computational results using whole numbers, fractions and decimals are correct and/or that estimates are reasonable.

Student Objectives:

Investigate rectangular arrays to use a geometric model to understand multiplication

Materials:

Color Tiles (1 inch square tiles) at least twelve per child

1/2 inch squared paper

Scissors

Tape or glue

or Kidspiration Template

Procedures:

1. Either access Kidspiration Template or distribute tiles so that each pair of children has twenty-four. Explain how the tiles are going to be “pretend” candy that comes in a square boxes and are always in one layer. Tell them that a sampler box has four candies in it. Ask each child to take four tiles and find a way that the candies might be arranged to fit in a box.
2. Write the dimensions 2×2 and 1×4 inside each rectangle that they drew. Read them aloud to the students and explain that the numbers tell how many tiles there are on adjoining sides. Then using the 1/2 inch squared paper, cut out the two different arrays and record the dimensions on each.
3. Pose the research problem: Each pair of students is the design research team of the candy company. The president of the company has asked for a report about the different boxes for six, twelve, and twenty-four candies. Give the children three directions:
 - a. For each number, use the tiles to find all possible rectangles.
 - b. As you find each rectangular shape, cut it out of 1/2 inch squared paper.

- c. Write a memo to the president explaining what you've learned about boxes for each quantity and what shape box you recommend. Include your cut-out boxes with your memo

[Link to activity](#)